Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade K			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	MA.K.14.A	communicate mathematical ideas using objects, words, pictures, numbers, and technology
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 1			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	MA.1.12.A	explain and record observations using objects, words, pictures, numbers, and technology
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 2			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	MA.2.13.A	explain and record observations using objects, words, pictures, numbers, and technology
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 3			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	MA.3.11.A	use linear measurement tools to estimate and measure lengths using standard units;
Finding the Center of Gravity Using Rulers	TX	MA.3.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Finding the Center of Gravity Using Rulers	TX	MA.3.15.B	relate informal language to mathematical language and symbols.
Finding the Center of Gravity Using Plumb Lines	TX	MA.3.11.A	use linear measurement tools to estimate and measure lengths using standard units;
Finding the Center of Gravity Using Plumb Lines	TX	MA.3.15.A	explain and record observations using objects, words, pictures, numbers, and technology

Changing the Center of Gravity Using Moment Arms	TX	MA.3.11.A	use linear measurement tools to estimate and measure lengths using standard units;
Changing the Center of Gravity Using Moment Arms	TX	MA.3.13.A	collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data;
Changing the Center of Gravity Using Moment Arms	TX	MA.3.14.C	select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem
Changing the Center of Gravity Using Moment Arms	TX	MA.3.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 4			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	MA.4.11.A	estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary;
Finding the Center of Gravity Using Rulers	TX	MA.4.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Finding the Center of Gravity Using Plumb Lines	TX	MA.4.11.A	estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary;
Finding the Center of Gravity Using Plumb Lines	TX	MA.4.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Changing the Center of Gravity Using Moment Arms	TX	MA.4.11.A	estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary;
Changing the Center of Gravity Using Moment Arms	TX	MA.4.14.C	select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem
Changing the Center of Gravity Using Moment Arms	TX	MA.4.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Exploring the Extreme			

2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	TX	MA.5.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Jet Propulsion	TX	MA.5.15.B	relate informal language to mathematical language and symbols.
Vectoring	TX	MA.5.15.A	explain and record observations using objects, words, pictures, numbers, and technology
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	TX	MA.6.12.A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and
Jet Propulsion	TX	MA.6.12.B	evaluate the effectiveness of different representations to communicate ideas.
Vectoring	TX	MA.6.8.C	The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles. The student is expected to: measure angles;
Vectoring	TX	MA.6.10.D	solve problems by collecting, organizing, displaying, and interpreting data.
Vectoring	TX	MA.6.12.A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and
Vectoring	TX	MA.6.12.B	evaluate the effectiveness of different representations to communicate ideas.
Center of Gravity, Pitch, Yaw	TX	MA.6.2.D	estimate and round to approximate reasonable results and to solve problems where exact answers are not required; and
Center of Gravity, Pitch, Yaw	TX	MA.6.3.B	represent ratios and percents with concrete models, fractions, and decimals; and
Center of Gravity, Pitch, Yaw	TX	MA.6.8.A	estimate measurements (including circumference) and evaluate reasonableness of results;

Center of Gravity, Pitch, Yaw	TX	MA.6.11.D	select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	TX	MA.7.14.A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and
Jet Propulsion	TX	MA.7.14.B	evaluate the effectiveness of different representations to communicate ideas.
Vectoring	TX	MA.7.14.A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and
Center of Gravity, Pitch, Yaw	TX	MA.7.3.A	estimate and find solutions to application problems involving percent; and
Center of Gravity, Pitch, Yaw	TX	MA.7.13.D	select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.
Fuel Efficiency	TX	MA.7.3.A	estimate and find solutions to application problems involving percent; and
Fuel Efficiency	TX	MA.7.4.A	generate formulas involving unit conversions within the same system (customary and metric), perimeter, area, circumference, volume, and scaling;
Exploring the Extreme			
2005 Mathematics			
Essential Knowledge and Skills			
Texas Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	TX	MA.8.15.A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and
Jet Propulsion	TX	MA.8.15.B	evaluate the effectiveness of different representations to communicate ideas.
Vectoring	TX	MA.8.15.A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and

Vectoring	TX	MA.8.15.B	evaluate the effectiveness of different representations to communicate ideas.
Center of Gravity, Pitch, Yaw	TX	MA.8.1.A	compare and order rational numbers in various forms including integers, percents, and positive and negative fractions and decimals;
Center of Gravity, Pitch, Yaw	TX	MA.8.3.B	estimate and find solutions to application problems involving percents and other proportional relationships such as similarity and rates.
Fuel Efficiency	TX	MA.8.8.C	estimate measurements and use formulas to solve application problems involving lateral and total surface area and volume.